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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,604	09/12/2003	Anton Schick	32860-000568/US	7869

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EXAMINER	
ROSENBERGER, RICHARD A	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/660,604	SCHICK, ANTON	
	Examiner	Art Unit	
	Richard A. Rosenberger	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment: See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-31 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 12 September 2005 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/12/03;2/18/05.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In at least claims 1, 2, 20, 21, 30 and 31, it is unclear what the terms "optical input" and "optical output" refer. It is unclear whether the terms refer to the light source and detectors (as suggested, by example, by claims 8 and 9), or other optical elements, such as, for example, apertures (as suggested, for example, by claim 7).

In claims 1 and 20, it is not clear what is meant by the input(s) being "in the same place" as the output(s).

In claims 2 and 21 it is not clear what "the same point" is meant, and whether "the same point" is intended to mean as "the same place" in their parent claims 1 and 20. Also, it is not clear what "positioned offset sideways" means in the context of the claim; the direction "sideways" is not given adequate definition in the claim to clearly set forth what direction is "sideways".

In claims 6, 7, 9, 14, 15, 16, 17, 19, 25, 26, and 28, various claimed features are described as being "implemented by way of" particular elements. This is not standard U.S. usage and it is unclear if the intended scope is "comprising", "consisting of", or something else.

Claims not specifically mentioned above at least inherit the rejections of their parent claims above.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 20, 24, 26, 27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Picard (US 4,965,441).

As in independent claim 20, the reference teaches, in particular in figure 4, a system with a first and second output means for outputting first and second illumination beams; see column 5, lines 13-15 for a teaching that light source 11 in figure 4 of the reference may comprise two separate beams which are merged. There is an optical means (lens 30) for directing the merged beams onto a surface with real images at diffe3rent distance from the optical means (lens 30). As understood (see the rejection under 35 USC 112 above), there are first and second input means for creating measuring beams; the measuring beams are clearly created, and extend from the surface through lens 30 to detectors 20; thus there appears to be first and second optical input means disclosed in the same manner as in the disclosed embodiments of the instant specification. There are first and second light detection means (any two of detectors 20)

for recording the intensities of the tow measuring beams, and an evaluation means (22) for determine the distance between the sensor and the surface.

Similarly as above for independent claim 30.

As in dependent claim 24, the optical input means and out put means are at least approximately point shaped, and, as in dependent claim 26, are "each implemented by way so a diaphragm" (elements 12 and 21). As in claim 27, the detectors are "monochrome light detectors", that is, each detects only light of its own particular wavelength.

5. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Picard (US 4,965,441).

The reference teaches does not appear to teach the light detectors can be cameras. It would have been obvious to use any type of known and available light detectors, including cameras, because it is the detection of the light in a manner suitable for analysis, and not the particular means used for the detection, that is of functional importance, and cameras are well-known and available detectors.

6. Claims 1 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Picard (US 4,965,441).

The reference shows, in figure 7, a system in which there are first and second optical outputs (the branches off of beam splitters 52 on the left side of elements 36 and 51), and a beam splitter (beam splitter 52 on the right side of the elements 36 and 51) which merges the beams. There is an imaging optic (56) which, at least in part because

the optical output means are different distances from the imaging optics, causes the images of the different beams (31, 32, 33) to be at different distances from the imaging optics. There are optical inputs in the same place as the outputs to receive the beams and direct them to a detector (20) with an evlauation unit (22). Although the reference does not teach in this embodiment having separate detectors, in the embodiment of figure 4 the reference does teach that separate detectors can be used, and it would have been obvious to use separate detectors in the embodiment of figure 7 because this would simplify the processing of the system by not having to separate the signals after detection within the processing system 22.

Similarly for claim 31.

As in claim 5, the optical inputs and outputs are at least approximately point shaped, and as in claims 7 and 17, the reference at least suggest the use of a diaphragm to so shape the light beams; see the diaphragms illustrated in figures 1, 2, 3, 4, 5 and 7.

As in claim 8, The use of monochrome detectors would have been obvious because this would help reduce the unwanted interference of ambient light.

As in claim 9The reference teaches does not appear to teach the light detectors can be cameras. It would have been obvious to use any type of known and available light detectors, including cameras, because it is the detection of the light in a manner suitable for analysis, and not the particular means used for the detection, that is of functional importance, and cameras are well-known and available detectors

7. Claims 6, 15 and 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Picard (US 4,965,441) in view of Makita (US 5,017,796).

Picard (see above) does not appear to teach the use of optical fibers to direct light to and form the imaging means. It is known to use fibers for such purposes; see the use of the fibers in the similar system of Makita. The use of fibers in system of Picard, in a manner such as shown by Makita, would have been obvious because it is,a s shown by Makita, known to so use fibers.

8. As understood (see the rejections under 35 USC 112 above), it appears that what is intended to be claimed in clams 2 and 21 and in the claims dependent therefrom (claims 3, 4, 10-14, 16, 18, 19, 22, 23 and 29) would be allowable if clearly claimed. The art does not appear to teach or suggest the multiple pairs of associated inputs and outputs as illustrated in instant figure 3.

Ishihara (US 5,737,084) shows a system with a plurality of associated inputs and outputs. Note figure 1, which shows a system similar to half of a system such as in instant figure 1, and in figure 2 shows a plurality of such systems arranged in parallel (see column 2, lines 64-65 in particular). However, it does not have the two pairs of systems with different focal planes at the object being measured. Stern (US 4,629,324) shows a similar parallel system, which also does not have the pairs of systems with different focal planes at the object.

Gross et al (US 4,585,349) and Wihl et al (US 6,917,421) shows systems, similar to that of Picard applied above, with a plurality of light beams focused at different distances from an imaging means onto a surface being measured. Neither of these, nor Pacard, appears to teach a plurality of laterally offset points of pairs of differently focused light beams as in instant figure 3 and in instant claims 2 and 21 as understood.

Davies (US 4,666,304) shows a similar system with two light beams; one of the light beams is focused onto the object, and the other is focused at infinity as a kind of reference which is independent of the distance of the object (column 2, lines 65-67). Note the use of and the placement of the fibers in the system of Davies, in particular fhe fiber end 5.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
6 December 2005

Richard A. Rosenberger
Primary Examiner